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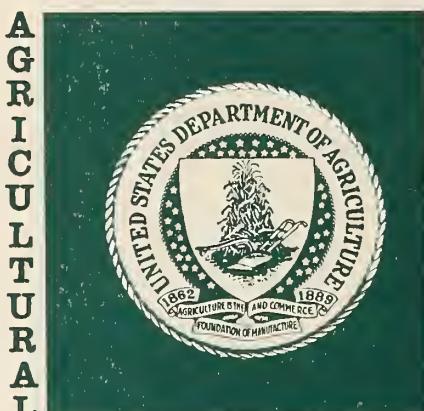
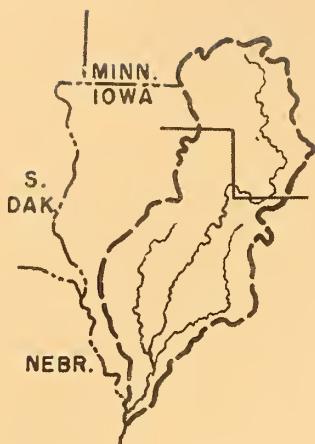


The Little Sioux River Flood Prevention Project

U.S. Department of Agriculture
Soil Conservation Service
Des Moines, Iowa



NATIONAL



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A little mass erosion flooding and control in the Little Sioux River Watershed area in Northwest Iowa seemed a formidable task.

Yet, in little over a quarter century, nearly two-thirds of that gigantic job has been accomplished. Conservation treatment has been completed in 79 of 130 potential subwatersheds, and work is being planned on 17 others.

The conservation concept in the Little Sioux Flood Prevention Project has grown from stopping flooding and erosion to include total community benefits such as recreation and water supplies. The plans are being carefully reviewed to ensure that the project continues to be one of total environmental improvement.

We are proud of the progress made in this relatively short period of time, and indebted to the Iowa Department of Soil Conservation, State Conservation Commission, USDA Soil Conservation Service, Extension Service, Agricultural Stabilization and Conservation Service, and many local groups and individuals who have played an important part in carrying out this successful program.

**Little Sioux Works Committee
and District Commissioners**

431687



Early years

Early historians called the picturesque Little Sioux River Valley a promised land. The fertile area with gently rolling prairie soils in the uppermost one-third and the level lands at the lower reaches with steep slopes in between abounded in food for the Sioux Indians and early settlers.

One county historian predicted only a small portion of the deep soil would ever wash. Yet, 80 years later about 1/4 of the land in the county had lost half its original topsoil. The other land in the county had lost 1/4 of its topsoil. Huge gullies, 20 to 50 feet deep and 100 to 200 feet wide, were common. The loess soil that washed from the land moved downward to clog vital bottomland drainage ditches, causing an equally serious and expensive problem. A century of careless agricultural development had taken its toll.

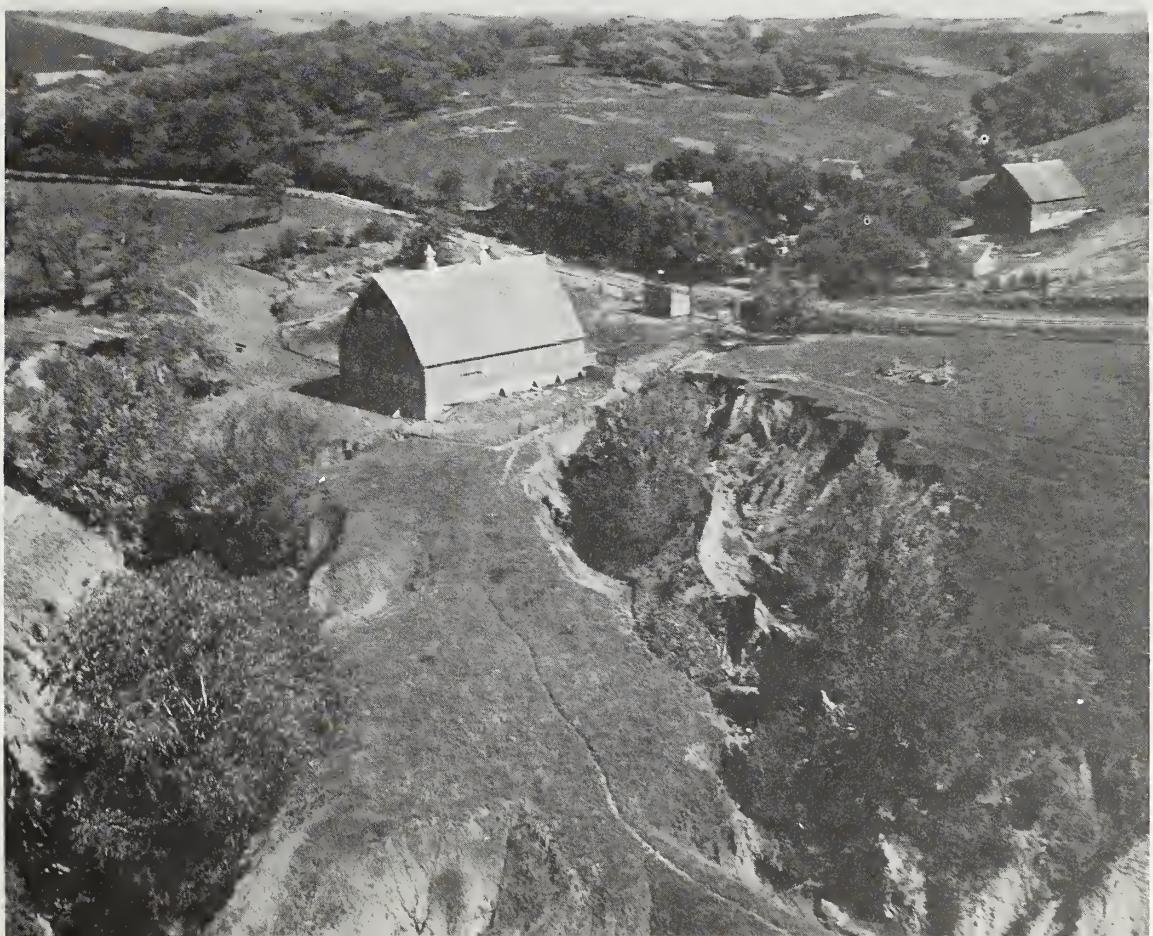
Local people began to organize to fight the problem in the 1940's. Soil Conservation Districts were formed in each of the counties in the Little Sioux River Watershed to bring attention to erosion problems on a local basis. Each district, in turn, was then represented on the Little Sioux Works Committee for overall planning.

The Works Committee was responsible for setting up policies of cooperation with the federal government on flood prevention work; enlisting help of private organizations and public agencies; securing legal aid; and setting up priorities for assistance to subwatershed groups of farmers. Individual districts were responsible for working with local farmers to install conservation measures and to obtain legal land rights and permits from landowners to install and maintain program measures.

In 1946, the Little Sioux Flood Prevention Project was put into operation. The Soil Conservation Service increased technical assistance to districts and provided funds for installation of flood prevention measures.



Two Woodbury County scenes typical of the early erosion problems in the Little Sioux River Valley.
Cover photo shows solution for gully in Lum Hollow Subwatershed (above).



Continuing the Environmental Program

The present landscape of the Little Sioux Valley contrasts sharply with its ragged, worn out appearance in the early 1940's. Water sparkles in the 425 miniature lakes that have been formed to stop gullying and prevent excessive flooding. More than 2500 miles of terraces lace the countryside, protecting uplands from erosion. In addition, 386 "full flow" structures have been built. Of a total of 951 completed stabilizing structures, 140 were built to help stabilize roads and eliminate costly bridge replacement and repair. More than 16 miles of floodways have been built, along with more than 600 acres of structural waterways.

The 425 miniature lakes and numerous farm ponds provide fishing, swimming, and habitat for wildlife, in addition to doing their erosion control job. All the conservation practices have helped to improve land values in the area. The concept of multiple uses of land and water is being included in plans for the future.

Two subwatersheds are in the construction phase now; three more are scheduled for construction this year; another has technical planning completed. A planning priority has been placed on 11 other subwatersheds. The authorized completion date for the Little Sioux project is 1992.

All projects are being reviewed for their impact on the environment. The completed subwatersheds have proven their beneficial effects on the environment frequently during heavy rains. The structures have had no significant damage while holding back runoff from hard rains to curb flooding.

Eight Soil Conservation Districts are principally concerned with executing the program. They are O'Brien, Plymouth, Cherokee, Buena Vista, Woodbury, Ida, Sac and Monona. Four other SCD's with a limited interest are Osceola, Dickinson, Clay and Palo Alto. Very small portions of Crawford and Harrison SCD's are included in the Little Sioux Project area.

With the Little Sioux River Flood Prevention Project, the people throughout the Little Sioux River Valley are helping to keep their land productive and ensuring generations to come that they will have a better place to live.



A huge gully in Little Egypt Subwatershed was stopped with a structure (upper right), which provides recreation as well as erosion and flood control.

Many other smaller structures have also been included in upland treatment (right).



An upland conservation treatment practice growing fast in the area is conservation tillage (right). Farmers are also building parallel, grassed back-slope level terraces to conserve their soil and water (below).



January 1973

FLOOD PREVENTION WATERSHED
LITTLE SIOUX PROJECT
SUBWATERSHED STATUS

No.	Subwatershed	No. of Contracts	Size (Acres)	Soil Conservation District	Work Plan Completed & Authorized (Date)	Construction Completed (Date)
<u>PROJECT COMPLETED</u>						
1	Nepper	1	485	Monona		8/23/48
2	Theobold	1	860	Woodbury		9/30/49
3	Martin	1	509	Cherokee		7/1/50
4	Kirkholm	1	818	Ida		9/30/49
5	Mortensen	1	1,211	Cherokee		7/1/50
6	Perion	1	2,030	Ida		9/30/49
7	Croy	6	4,722	Monona		11/21/52
8	Garton	1	407	Buena Vista		8/31/51
9	Black Slough	1	805	O'Brien		7/31/51
10	Simonsen	1	1,120	Cherokee		5/6/52
11	Masters	1	524	Monona		7/31/50
12	Walling	2	2,269	Woodbury		12/4/53
13	Habinck	2	2,956	Monona-Woodbury		5/19/53
14	East Aldrich Creek	2	1,852	Ida		7/9/54
15	Fee	1	918	Cherokee		6/21/54
16	Anthon	1	514	Woodbury		10/16/54
17	Gallup	1	1,407	Monona		9/8/54
18	Moore	1	462	Monona		9/23/55
19	Weber Creek	1	2,422	Woodbury		9/20/55
20	McMaster	1	1,817	Monona		4/11/56
21	Robeson	1	2,220	Cherokee		8/13/55
22	Phillips	1	2,595	Monona		9/12/56
23	West Fork No. 1	1	1,791	Woodbury	5/54	10/26/55
24	Weber	1	1,720	Woodbury		11/20/56
25	Tom King	1	1,606	Monona		9/15/56
26	Little Beaver	2	2,980	Woodbury	2/56	10/2/57
27	Clark	1	1,452	Cherokee		10/13/56
28	Davis	2	4,177	Woodbury	3/28/57	9/19/58
29	Cord	1	724	Woodbury	11/8/56	9/24/57
30	Nutt Hollow	1	2,220	Monona	12/10/56	11/1/58
31	Woodward Glen	1	2,965	Monona	3/29/57	6/23/58
32	Lum Hollow	1	6,390	Woodbury	9/7/57	9/18/59
33	Arrowhead	1	2,826	Woodbury	4/10/58	11/26/58
34	Wolf Creek (Piero)	1	16,350	Woodbury	7/58	10/13/59
35	Mike Mikkelson	1	6,083	Monona	4/10/58	10/5/60
36	East Waterman Creek	1	1,745	O'Brien	8/29/58	6/7/60
37	Little Egypt	1	2,638	Woodbury	9/19/58	8/31/60
38	Miller	1	797	Woodbury	2/16/59	6/8/60
39	Baker	1	1,604	Monona	11/24/58	6/28/60
40	McDonald	1	1,869	Woodbury	4/3/59	9/15/60

No.	Subwatershed	No. of Contracts	Size (Acres)	Soil Conservation District	Work Plan Completed & Authorized (Date)	Construction Completed (Date)
<u>PROJECT COMPLETED (cont'd)</u>						
41	Woods Hollow	1	1,460	Monona	5/25/59	10/17/60
42	Heisler Creek	1	2,775	Woodbury	7/17/59	5/10/61
43	Maple	1	496	Woodbury	3/21/60	9/16/60
44	West Beaver	1	1,329	Monona	11/12/59	8/11/61
45	Washburn	1	2,840	Woodbury	7/19/60	8/24/61
46	Waterman Spring	1	2,680	O'Brien-Cherokee	7/25/60	8/18/61
47	Elkhorn No. 2	1	2,037	Plymouth	1/30/61	9/25/61
48	Arnold Armstrong	6	7,990	Monona	3/28/57	10/7/64
49	West Fork No. 3	1	3,325	Woodbury	2/24/60	8/23/62
50	U-B	1	896	Monona	12/12/61	4/16/63
51	Huff	1	2,786	Monona	1/24/62	10/23/63
52	Pilot Rock	1	2,265	Cherokee	11/11/62	10/10/63
53	McCall	3	8,382	Monona	4/22/63	10/65
54	Glen Ellen	1	2,873	Woodbury	4/17/63	12/4/63
55	Pleasant Valley	1	3,664	Ida	8/10/62	8/16/63
56	Bruene-Spahn	1	973	Woodbury	6/19/63	6/30/64
57	Gothier No. 2	1	498	Woodbury	11/22/63	9/10/64
58	Zellmer	1	1,988	Woodbury	10/11/63	11/10/64
59	Lower Beaver	1	5,145	Monona	12/12/63	6/65
60	Arcola	1	7,990	Monona	5/15/64	11/65
61	Wenger	1	1,861	Woodbury	6/10/64	11/65
62	Arlington	1	5,833	Woodbury	12/12/64	6/28/66
63	Muckey Creek	2	3,211	Monona	10/8/64	5/67
64	Cottonwood-Green Valley	1	3,984	Monona	1/11/65	9/66
65	Reed	2	5,529	Monona	3/31/65	5/67
66	McLarty-Edwards	1	2,531	Woodbury	5/28/65	7/7/67
67	Jett	2	1,852	Woodbury	12/22/65	9/67
68	Innes-Jallas	1	1,169	O'Brien	4/20/66	8/26/66
69	Grand Meadow	1	2,885	Cherokee	7/27/65	10/67
70	Barber Hollow	1	2,805	Monona	12/12/65	9/67
71	College Corner	1	4,084	Woodbury	3/7/66	5/68
72	Upper Beaver	1	3,224	Monona	5/1/66	7/68
73	Parnell	2	5,635	Woodbury	6/6/66	8/5/70
74	Big Whiskey One	1	3,639	Woodbury	11/29/66	11/4/68
75	Quad Valley	1	4,681	Ida	6/28/67	7/1/69
76	Willow Creek	1	3,653	Woodbury	5/7/65	10/29/69
77	Lawson	1	3,230	Monona	12/16/66	5/25/70
78	Ralston	1	2,652	Woodbury-Ida-Cherokee	1/12/67	7/23/71
79	Rodney	1	3,856	Monona	10/17/67	11/19/70
79	TOTAL	100	221,566			

No.	Subwatershed	No. of Contracts	Size (Acres)	Soil Conservation District	Work Plan Completed & Authorized (Date)	Construction Completed (Date)
<u>WORK PLAN COMPLETED</u>						
80	Wolf Creek	1	6,415	Woodbury	11/10/69	-
81	Neustrom	1	4,780	Woodbury	5/5/70	-
82	Crawford Creek <u>1/</u>		8,322	Ida		
83	Sunrise		2,915	Woodbury	7/31/72	
84	Mud Creek		1,926	Woodbury-Plymouth	7/28/72	
85	Dickman		7,786	Woodbury	7/28/72	
6	TOTALS	2 <u>2/</u>	32,144			
<u>WORK PLAN BEING DEVELOPED</u>						
86	Leech Hollow		8,135	Monona		
87	Bitter Creek		11,071	Ida-Woodbury		
88	Little Whiskey		12,599	Woodbury		
89	Windy Hill		6,416	Woodbury		
90	Railroad Creek		8,418	Cherokee		
91	Westside		4,626	Ida-Woodbury		
92	Dutch Hollow		6,014	Woodbury		
7	TOTALS		57,279			
<u>PLANNING PRIORITY GRANTED</u>						
93	Camp Creek		5,031	Woodbury		
94	West Wolf Creek		27,115	Woodbury		
95	Stratton Creek		5,500 +	Cherokee		
96	West Aldrich		9,300 -	Ida		
97	Cork Hill		1,995	Woodbury		
98	Palmquist		3,163	Woodbury		
6	TOTALS		52,104			

1/ Technical planning completed and now in review stage

2/ Construction contracts to date.

LITTLE SIOUX FLOOD PREVENTION
PROGRESS IN SUBWATERSHED INSTALLATION

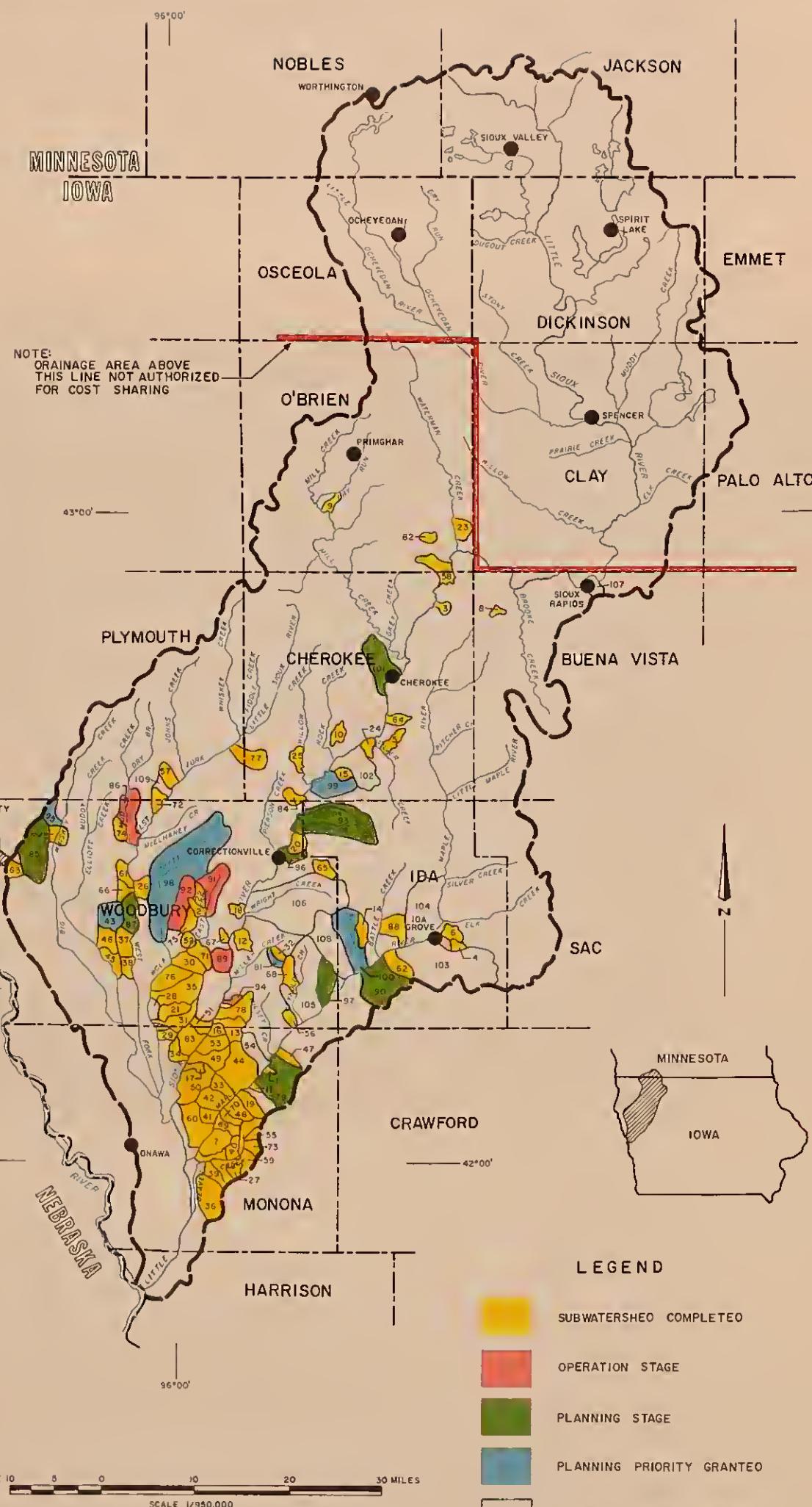
Subwatershed	Grade Detention Type	Stabilization Full Flow	Structure No.	STRUCTURAL MEASURES INSTALLED			Terraces Basin Cropland
				Road	Floodway Miles	Channel Improvement Miles	
<u>PROJECT COMPLETED</u>							
Nepper	2	3	1	0.62	1.15	0.44	0.50
Theobold	3	14	1	0	2.38	0.42	10.30
Martin	0	2	0	0	0.42	0	5.90
Kirkholm	5	13	1	0.17	2.18	0.68	0
Mortensen	2	5	0	0	1.08	0	0.70
Perion	3	4	0	0.36	1.88	4.80	1.80
Croy	21	71	0	4.84	9.31	5.04	7.10
Garton	1	6	0	0	1.54	0.16	0
Black Slough	0	2	0	0	0.47	0.52	0
Simonsen	5	5	0	0	1.71	0.24	2.30
Masters	3	0	0	0.37	1.01	0.20	0
Walling	13	29	3	0	8.54	5.72	0
Habinck	11	18	5	0	5.98	0	10.57
East Aldrich Creek	3	3	2	0	1.60	8.00	0
Fee	2	0	0	0	0.81	8.46	1.60
Anthon	3	6	1	1.05	0.50	2.12	0
Gallup	3	7	1	0.90	0.75	1.00	26.64
Moore	2	0	0	0	0	0	55.40
Weber Creek	9	10	1	0	4.00	8.48	19.75
McMaster	4	5	3	0.70	1.99	0.19	11.20
Robeson	3	1	0	0	0.10	0	0
Phillips	5	18	4	0	2.59	4.50	17.91
West Fork No. 1	5	0	1	0	0.83	1.06	0
Weber	1	0	1	0	0.10	1.00	16.00
Tom King	1	0	0	0	0	0	1.20
Little Beaver	5	7	2	0	3.07	2.39	27.70
Clark	2	2	0	0	0.58	2.50	7.20
Davis	8	12	3	0	0.35	2.07	24.90

Subwatershed	STRUCTURAL MEASURES INSTALLED									
	Grade Stabilization		Structure (No.)		Channel Improvement (Miles)		Structural Waterways (Acres)		Terraces	
	Detention Type	Full Flow	Road L/	Floodway (Miles)			Basin	Cropland		
PROJECT COMPLETED (cont'd)										
Cord	3	0	0	0	0.33	5.73	4.25	12.00		
Nutt Hollow	6	5	3	0	1.04	18.01	22.60	7.50		
Woodward Glen	1	2	1	0.28	0.09	1.66	15.80	2.60		
Lum Hollow	5	4	3	0	4.65	47.70	93.50	36.80		
Arrowhead	0	1	2	0	0.20	10.00	57.55	28.00		
Wolf Creek (Piero)	0	0	1	0	0.05	0	0	0		
Mike Mikkelson	12	8	0	0	0	31.66	73.58	12.90		
East Waterman Creek	3	0	2	0.45	0	5.05	0.20	3.50		
Little Egypt	7	0	5	0	0	27.07	39.80	15.00		
Miller	3	0	0	0	0.12	3.70	0.50	4.90		
Baker	3	4	0	0	0	8.18	13.20	10.70		
McDonald	3	1	0	0	0.72	12.64	23.55	13.20		
Woods Hollow	3	2	5	0	0.02	19.89	14.38	4.70		
Heisler Creek	7	1	0	0	1.20	11.00	37.53	13.50		
Maple	1	0	0	0	0	2.00	0	9.80		
West Beaver	5	0	3	0.77	0	1.55	12.23	2.50		
Washburn	3	0	2	0.48	0	7.73	0	4.30		
Waterman Spring	3	1	0	0	0	14.71	0.30	21.70		
Elkhorn No. 2	4	3	0	0	0	72.44	60.90	40.80		
Arnold Armstrong	22	20	12	1.90	1.08	16.54	14.31	19.40		
West Fork No. 3	6	0	1	0	0.13	0	27.10	9.30		
U-B	3	0	1	0	0	14.00	16.14	18.60		
Huff	5	3	2	0	0.10	0	5.50	13.66		
Pilot Rock	4	1	0	0	0.36	8.36	59.30	3.10		
McCall	12	3	4	1.55	0	2.67	16.90	25.00		
Glen Ellen	3	0	1	1.50	0	39.74	0.91	45.70		
Pleasant Valley	9	5	7	0	0	7.80	0	15.20		
Bruene-Spahn	1	2	3	0	0	3.10	1.20	5.90		
Gothier No. 2	2	2	2	0.32	0	15.90	13.60	28.00		
Zellmer	6	3	2	0	0.01	2.28	59.10	23.00		
Lower Beaver	3	2	2	0	0	4.98	34.57	2.10		
Arcola	5	7	2	0	0	0				

Subwatershed	STRUCTURAL MEASURES INSTALLED					
	Grade Detention Type	Stabilization Full Flow	Structure Road <u>1/</u>	Floodway Miles)	Channel Improvement (Miles)	Structural Waterways (Acres)
<u>PROJECT COMPLETED (cont'd)</u>						
Wenger	5	3	2	0	0	4.75
Arlington	9	2	0	0	8.80	0.30
Muckey Creek	8	1	0	0	2.60	11.44
Cottonwood-Green Valley	5	1	4	0	1.70	21.20
Reed	14	4	4	0	7.20	25.60
McLarty-Edwards	7	3	0	0	0	47.88
Jett	4	1	1	0	1.40	1.70
Innes-Jallas	1	0	1	0	0	0
Grand Meadow	3	3	0	0	1.44	1.40
Barber Hollow	4	0	0	0	0	0
College Corner	4	1	2	0	0	0
Upper Beaver	9	0	0	0	1.00	0
Parnell	13	5	7	0	0	2.00
Big Whiskey One	3	2	2	0	0.13	3.00
Quad Valley	6	8	7	0	0	1.00
Willow Creek	6	4	1	0	5.00	3.49
Lawson	4	5	2	0	0.39	3.70
Ralston	4	5	0	0	0.35	6.57
Rodney	7	2	2	0	0	1.30
TOTALS	408	384	132	14.26	71.68	602.84
<u>PROJECTS - CONSTRUCTION UNDERWAY 2/</u>						
Wolf Creek	9	2	4	0	0	0.40
Neustrom	8	0	4	0	0	0
TOTALS	17	2	8	0	0	0.40
					1168.15	1241.06

1/ Includes structures completed by county and district.

2/ Includes structures completed or under contract and completed terraces.



LITTLE SIOUX FLOOD PREVENTION PROJECT STATUS OF SUBWATERSHEDS MINNESOTA - IOWA

SUBWATERSHED MAP INDEX

INDEX NO.	NAME	CO.
1	NEPPER	M
2	THEOBOLO	W
3	MARTIN	C
4	KIRKHOLM	I
5	MORTENSON	C
6	PERION	I
7	CROY	M
8	GARTON	BV
9	BLACK SLOUGH	O
10	SIMONSEN	C
11	MASTERS	M
12	WALLING	W
13	HABINCK	M
14	EAST ALDRICH CREEK	I
15	FEE	C
16	GALLUP	M
17	McMASTER	M
18	ANTHON	M
19	PHILLIPS	M
20	MILLER	W
21	WEBER CREEK	W
22	WEBER	W
23	EAST WATERMAN CREEK	O
24	CLARK	C
25	ROBESON	W
26	WEST FORK ONE	C
27	MOORE	M
28	HELMING	M
29	TOM KING	M
30	LITTLE BEAVER	W
31	DAVIS	W
32	CORO	W
33	NUTT HOLLOW	M
34	WOODWARD GLEN	M
35	LUM HOLLOW	W
36	MIKE MIKKELSON	M
37	LITTLE EGYPT	W
38	ARROWHEAD	W
39	WOODS HOLLOW	M
40	WEST BEAVER	M
41	BAKER	M
42	LAWSON	M
43	CAMP CREEK	W
44	ARNOLO-ARMSTRONG	W
45	WASHBURN	W
46	HEISLER CREEK	W
47	MUCKEY CREEK	M
48	HUFF	M
49	REED	M
50	McCALL	M
51	McONALO	W
52	WOLF CREEK (PEIRO SITE)	W
53	BARBER HOLLOW	M
54	EO BANKS	M
55	U.B.	W
56	MAPLE	P
57	ELKHORN NO. 2	M
58	WATERMAN-SPRING	W
59	LOWER BEAVER	I
60	ARCOLA	M
61	WEST FORK NO. 3	W
62	PLEASANT VALLEY	I
63	GLENN-ELLEN	W
64	PILOT ROCK	C
65	BRUNE-SPAHN	W
66	ZELLMER	W
67	GOTHIER NO. 2	W
68	WENGER	W
69	GREEN VALLEY	M
70	COTTONWOOD	W
71	WILLOW CREEK	W
72	ARLINGTON	M
73	UPPER BEAVER	W
74	MCALRTY-EDWARDS	W
75	JETT	W
76	COLLEGE CORNER	C-P
77	GRANO MEAOOW	W
78	PARNELL	W
79	LEECH HOLLOW	M
80	BIG WHISKEY NO. 1	W
81	CORK HILL	W
82	INNES JALAS	O
83	RODNEY	M
84	RALSTON	C-W
85	LITTLE WHISKEY	W
86	MUD CREEK	P-W
87	WINOY HILL	W
88	QUAD-VALLEY	I
89	SUNRISE	W
90	CRAWFORD CREEK	I
91	WOLF CREEK	W
92	NEUSTROM	W
93	BITTER CREEK	I
94	DICKMAN	W
95	PALMOUST	W
96	WESTSIDE	I-W
97	OUTCH HOLLOW	W
98	WEST WOLF CREEK	W
99	STRATTON CREEK	C
100	WEST ALORICH	I-W
101	RAILROAD CREEK	C
102	FOUR MILE CREEK	C
103	BAODER CREEK	I
104	CORWIN-LOGAN	I
105	REYNOLDS CREEK	W
106	MIOWAY-WRIGHT	W-I
107	SIOUX RAPIDS	BV
108	MOOREHEAD CREEK	W-I
109	ELKHORN NO. 1	P

CODE

C-CHEROKEE
W-WOODBURY
I-IDA
M-MONONA
P-PLYMOUTH
BV-BUENA VISTA
O-O'BRIEN



Farmers: First Environmentalists

Right in the backyard of northwest Iowa we have one of the greatest achievements of environmental handling to date - the Little Sioux project.

A lot of people today are talking loud about ecology and what should be done. But there are a few thousand dirt farmers in our area who started to work 23 years ago and didn't even know what the word ecology meant. They began taking hold then in the newly-Congressional-created Little Sioux Flood control project.

It was a challenge to the Soil Conservation Service and the half-dozen farmer-run soil districts encompassed in the big watershed of the Little Sioux River. When started, it was one of 11 "pilot" watersheds in the nation, a big job to be done, if indeed it could, and involving thousands of farm people and multi-thousands of acres. The job got going slowly because it was a new idea and unproved.

Today's results are impressive: Hundreds of cooperating farms with miles and miles of cropland and basin terraces, hills and waterways seeded down, contoured crop acres and gully-control structures created with earthen dams scattered throughout, and countless new "lakes" formed for recreation, fishing and flood control.

Control of a whole valley, to stop gully-ing and land erosion, as in this case of the Little Sioux and its tributaries, plus additional benefits in stopping bottomland flooding, was a dream, once.

It no longer is. Results have shown up. Once-disappearing, eroded farms are back in production; lowland fields are safe. Many acres are higher in value than ever before. Success of accomplishment in northwest Iowa's Little Sioux project has been displayed time and again to visitors from throughout the United States. It has become an impressive model. Foreign visitors, too, have toured and asked questions and learned.

The Journal has watched this project from its beginning. We commend the Soil Conservation Service for doing an outstanding, dedicated job by its hundreds of people over the years; we salute the farmers and soil conservation districts for their local, on-the-farm actions.

Most important, the northwest Iowa farmers in this huge valley project have done and accomplished these goals voluntarily. No coercion, no lawsuits, no forcing. They have paved the way.

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Photos: IO-455-9, Page 3 and IO-258-2, IO-459-9,
Page 7. Negatives not in file, lithographic
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